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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,016	04/10/2001	Shilin Chen	SC-98-25A	1340

7590 05/23/2002

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EXAMINER

DANG, HOANG C

ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 05/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/833,016	CHEN, SHILIN
	Examiner	Art Unit
	Hoang Dang	3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 June 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 11 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 11 and 14-16 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression “the force balance conditions of a bit” in claim 11, line 3 has no proper antecedent basis. Further, this expression is indefinite because it is not defined. In other words, what is it meant by a bit having the “force balance conditions”?

Claim 11 is incomplete in that it is not clear what type of variables are defined in step (b) (e.g., how are these variables related to the roller cone drill bit being designed); what is optimized in step (f) and how it is optimized in step (f).

Claim 11 is further incomplete in that the preamble indicates that the claim is directed to a method of designing a roller cone drill bit. However, no steps in the claim body to show that a roller cone drill bit is actually designed or constructed. What is the relationship between the “cutting structure” recited in step (g) and the “roller cone drill bit” recited in the preamble or in step (a)? What is the relationship between steps (f) and (g) and the other steps of the claim?

Claim Objections

3. Claim 11 is objected to because of the following informalities: The word “mathematically” in claim 11, lines 6 and 8 is misspelled. Appropriate correction is required.

Specification

4. The disclosure is objected to because of the following informalities: The copending application recited on page 11, lines 1923 should be updated.

Appropriate correction is required.

Priority

5. This application filed under former 37 CFR 1.60 lacks the necessary reference to the prior application. A statement reading "This is a Continuation of Application No. 09/387,737, filed 8/31/1999, now U.S. Patent No. 6213225." should be entered following the title of the invention or as the first sentence of the specification. Also, the current status of all nonprovisional parent applications referenced should be included.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All of the references listed on the attached form PTO-892 were cited during the prosecution of the parent application Serial No. 09/387,737.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Dang whose telephone number is 703-308-2149. The examiner can normally be reached on 9:15-5:45 Monday-Friday.

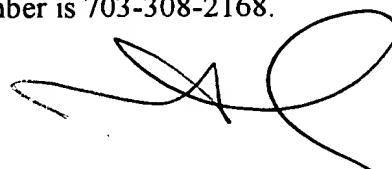
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bagnell can be reached on 703-308-2151. The fax phone numbers for the

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Art Unit: 3672

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organization where this application or proceeding is assigned are 703-305-3597 for regular communications and 703-305-3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.



Hoang Dang
Primary Examiner
Art Unit 3672

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May 18, 2002